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December 17, 1999

Mr. Dale Hatfield
Chief – Office of Engineering and Technology
Federal Communications Commission
445 12th Street, SW
Room 7-C155
Washington, DC 20554

Re: Final Service Outage Report

Dear Mr. Hatfield:

In accordance with the requirements in CC Docket 91-273, enclosed is the Final Service Disruption Report for the Bell Atlantic service outage that occurred on November 19, 1999 affecting the business district of Center City in Philadelphia.

Please call me if you have any questions about this report or other service outage issues.

Sincerely,

Fran Folgner

Enclosure

cc: R. Kimball

BELL ATLANTIC – PENNSYLVANIA
FCC NETWORK DISRUPTION
FINAL SERVICE DISRUPTION REPORT

This Final Service Disruption Report is filed by Bell Atlantic on behalf of its telephone operating company, Bell Atlantic- Pennsylvania (BA-PA), in accordance with Section 63.100 of the Commission's Rules in the Second Report and Order in CC Docket 91-273, 9 FCC Rcd 3911 (1994), as revised by the Order on Reconsideration, released October 30, 1995, 10 FCC Rcd 11764 (1995). Bell Atlantic filed an Initial Report on November 20, 1999 notifying the Commission of an outage on November 19, 1999 affecting the business district of Center City in Philadelphia.

On November 19, 1999, Bell Atlantic and vendor personnel in the Locust (PHLAPALO) Central Office (CO) began a scheduled matrix expansion on the Alcatel Integrated Multirate Transport Node (iMTN) broadband cross connect system. In accordance with the established Method of Procedure (MOP), activities were being performed as outlined in the 1152-4608 iMTN Broadband Matrix Expansion, Alcatel Procedure 003-9021-094. During step 6.6.2 power was to be removed from the old 1152 "A" matrix bays. At 11:04 PM, the vendor technician removed the wrong fuses at the Battery Distribution Fuse Bay (BDFB) without sufficient verification. This action eliminated power to both feeds to the Admin bay. In addition to administrative functions, the bay also houses the Timing/Control/Communication (TCC) shelf that contains both system synchronization sources. The loss of both synchronization sources resulted in the failure of the iMTN system, interrupting service on 500 T3 systems. The fuses were immediately replaced and the process of restoring the machine and clearing alarms began. All cards became active and service was restored by 1:30 AM

Date of Incident:

Friday, November 19, 1999

Time of Incident:

11:04 PM

Duration of Outage:

2 Hour, 26 Minutes

Geographic Area Affected:

Center City Philadelphia

Estimated Number of Customers Affected:

This outage potentially affected 49,500 access lines.

Type of Services Affected:

This incident affected switched intraLATA and interLATA message trunks as well as private line and other special access services.

Estimated Number of Blocked Calls:

There were no blocked calls because of this outage. Alternate routes for message trunks were available for all the affected groups. E911 service was not affected by this incident.

Cause of the Incident, Including Name and Type of Equipment Involved and Specific Part(s) of the Network Affected:

Root Cause Analysis:

Direct Cause: Loss of power to the Admin Bay of the digital cross connect system.

Affected Element: iMTN Digital Cross Connect System

Outage Cause: The wrong fuses were pulled at the BDFB.

Duration Cause: The iMTN took 2 hours and 26 minutes to initialize.

Root Cause Finding:

A procedural error by the vendor technician resulted in the wrong fuses being removed.

Methods Used to Restore Service:

The fuses were replaced immediately and the iMTN restoral process began.

Current or Proposed Company Practices Related to this Outage:

All work was being conducted in accordance with an approved Method of Procedure (MOP) and was taking place during "safe time." Bell Atlantic is requesting the vendor to improve the MOP to prevent similar events in the future.

Network Reliability Council "Best Practices" That Relate To This Incident:

Two "Best Practices" recommended by the Network Reliability Council in their report "Network Reliability: A Report to the Nation," applies to this outage: Section D, Para. 6.3.1.4.3 states that "Perform a detailed Root Cause Analysis for reported software faults and procedural errors" and Section D, Para. 6.2.4.3 states that " An acceptance testing check off sheet should be developed and utilized during each new installation or addition."

Describe How The NRC Recommendation(s) Could Have Prevented This Outage:

Improvements and additions in the Method of Procedure (MOP) related to hardware upgrades may more readily identify the components and lower the margin of error.

Steps Taken to Prevent Recurrence:

Bell Atlantic has requested the vendor to enhance the MOP to minimize the chance of human error.